

That which is claimed is:

A reactor for pyrolysis of hydrocarbons in production of low-molecular olefins, comprising an inlet nipple for supplying feedstock, an outlet nipple for carrying off cracked gas, a working  
5 wheel with blades, stationary blades and a housing provided with a cavity, the said working wheel and the said stationary blades are located in the said cavity and the said cavity is configured so, that hot pyrolyzed gas being in it can repeatedly passes through the same blades of the said working wheel and through the same said stationary blades, and the said inlet nipple and said outlet nipple are communicated with the said cavity.